Trauma Registry in Montana

Montana Trauma Coordinator
Course 2010

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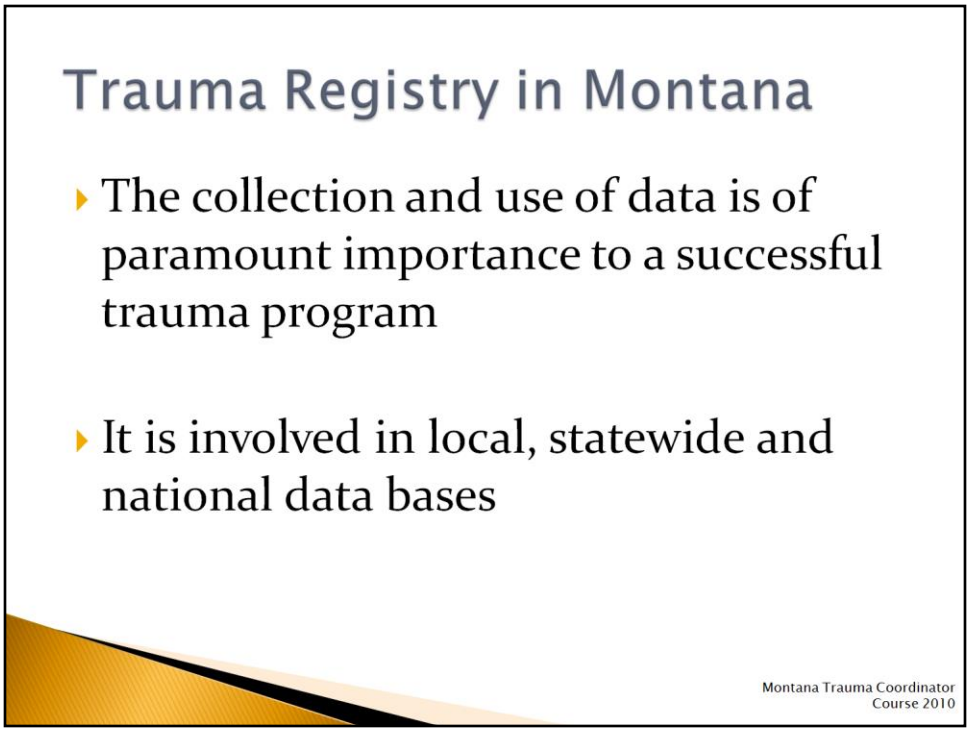
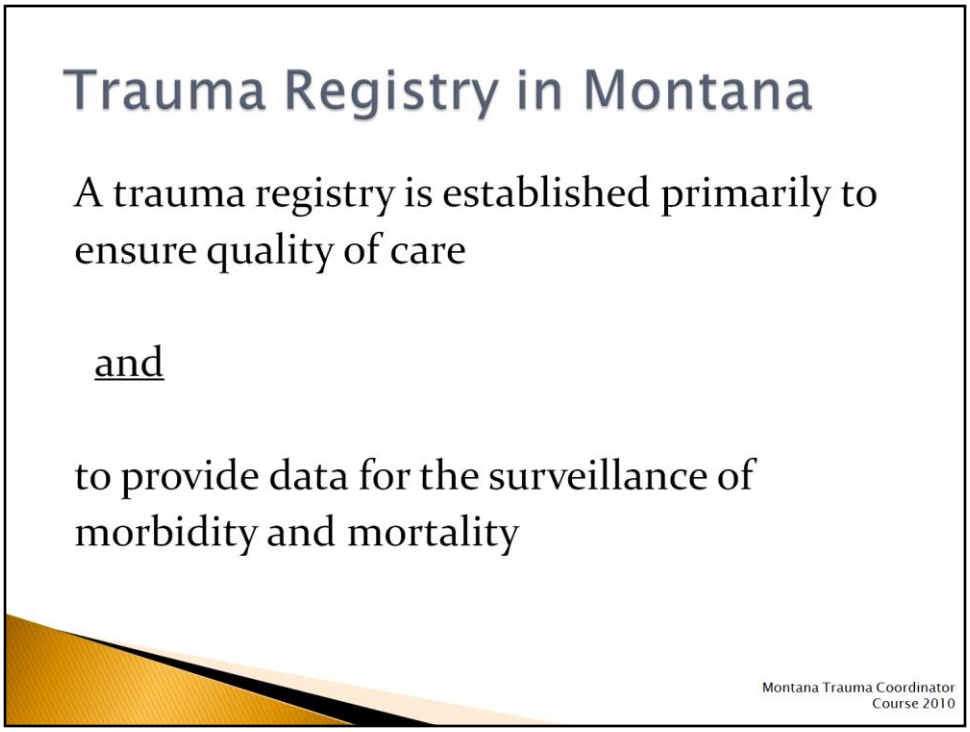
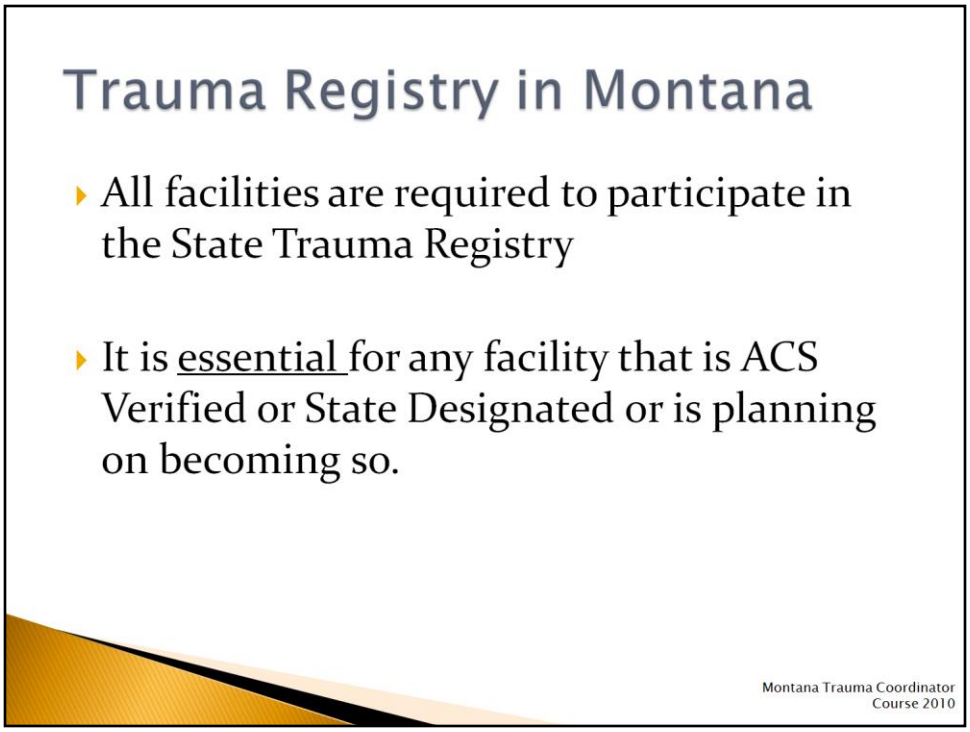
As you can see, we've come a LONG way, really! (especially in footwear)



"Data talks, anecdotes walk" is really the theme of any evidence-based system. Without data to analyze, trend and identify issues, we have no evidentiary base for our program activities, much less a method for determining true improvement. It is no longer adequate to describe "what we believe went wrong" or "how we think things are", we need a system to collect the data that can illustrate it.



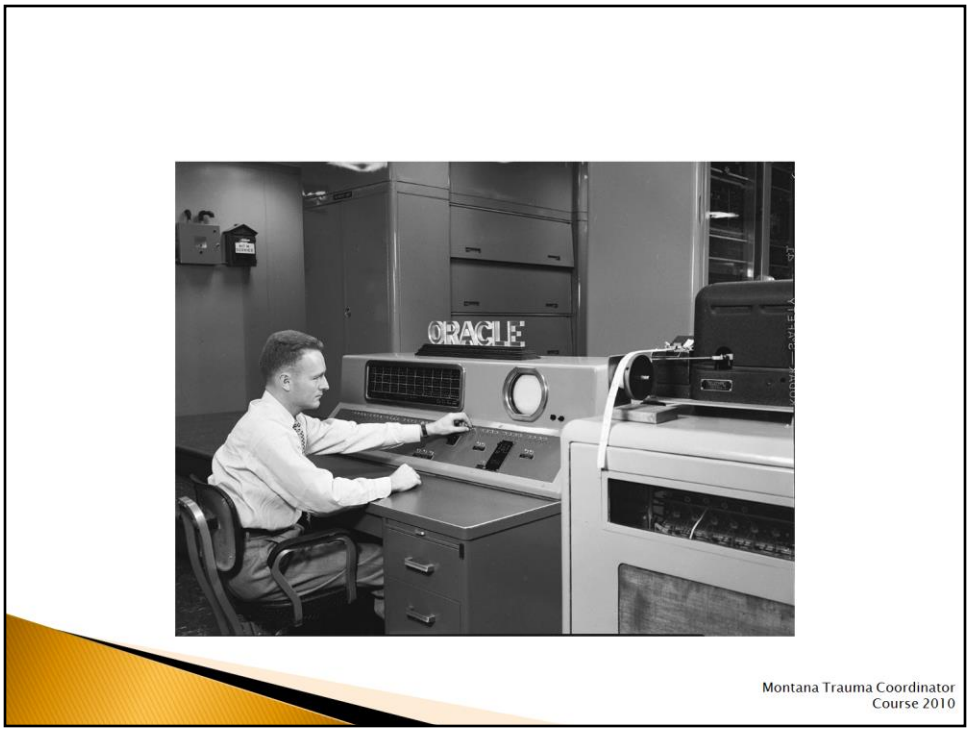
The trauma registry will help identify issues in patient care, system issues within your facility and activities that can be identified for injury prevention. How good is the charting and documentation from EMS and the facility? All of this can be evaluated using the trauma registry.



Most facilities that are participating in the State Trauma Registry are either ACS verified trauma facilities and/or are State designated facilities. We have a significant number of non-designated facilities that submit TR data/cases and more are submitting every year!

Trauma Registry in Montana

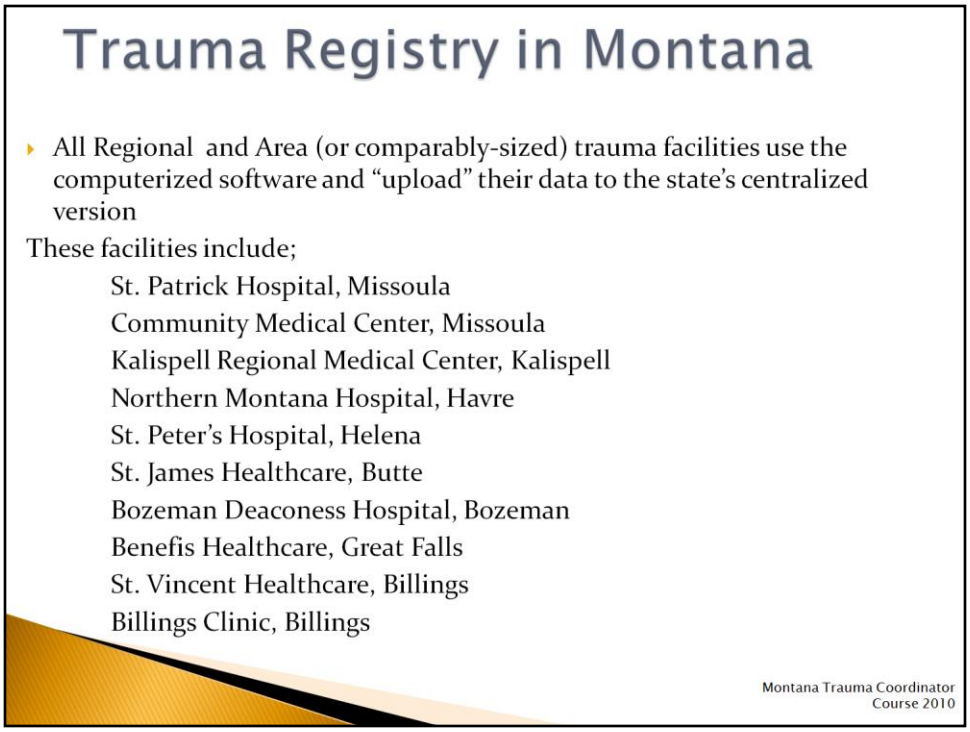
- Function and Purpose of the trauma registry;
  - To facilitate simple and accurate trauma data reporting for internal uses and for the state trauma system
  - To assist trauma hospitals in identifying patients who match their patient populations in that region
  - To collect and report the state required data



Initial Trauma Registry computer tools were different than they are today! (OK, maybe this is a slight exaggeration)

Trauma Registry in Montana

- The State of Montana Trauma registry formally began with the Cales registry software in the 1990s.
- In 2004, we changed to the "Collector" trauma registry software program from Digital Innovations, which the state provides to larger hospitals, who submit their data electronically each quarter
- The State of Montana has a centralized computerized version purchased from Digital Innovations
  "Collector, version IV", where data is transferred to or is manually entered from paper abstracts
- The volume of patients seen at facilities determines whether a facility has the computerized software version or uses a paper abstract form



There are currently ten facilities that use the software Collector program and download their cases to the State registry. These are busier facilities that see more patients and generally have more resources available for care of these patients.

Trauma Coordinators and Trauma Registrars attending continuing education

Trauma Registry in Montana

Trauma Registry in Montana

- The state Central Registry "Collector" software is set up so data can be entered for all Montana facilities (even those not currently submitting case data)
- Each facility is a given an identifying facility number , so that de-identified patient data can be aggregated and tracked
- There are many data elements in the software: "Collector" facilities may run reports (obtaining information) about their facility's patient population
- The State software is also available to run reports;
  - for those facilities using the paper abstract,
  - other regional, statewide reports (RTACs, STCC, etc)

Trauma Registry in Montana

- Technical Assistance is available through Digital Innovations at www.dicorp.com or **phone (410) 838-4034 :: email info@dicorp.com :: fax (410) 893-3199**
- **Or by EMS and Trauma Systems Section, DPHHS; Jennie Nemec, Carol Kussman, or Gail Hatch 444-3895**

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- All other facilities use the paper abstract form which was updated in 2009 to reflect the new Collector update the "State" received in April 2009.

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Include a 2009 paper abstract form

Paper Abstract Trauma Registry

- Facilities seeing smaller volumes of trauma patients utilize a paper abstract form to submit cases meeting criteria to the state
- EMSTS staff review paper abstracts
- Data points from paper abstracts are entered into the Central Trauma Registry
- Two computerized reports for each abstract are generated
- Submitted cases are reviewed for trends
- Paper abstracts are returned with computer reports and a letter with feedback and recommendations for care processes & PI

Trauma Registry in Montana

- There are defined criteria for which trauma patients are included in the registry
- Included patients really represent that "next level up" in care resources required (not every patient with injury)
- These criteria are discussed annually for inclusion or exclusion by all trauma coordinators and registrars and recommendations are submitted to STCC for consideration

Trauma Registry Inclusion Criteria August 2009

- Primary criteria for Inclusion
  - Must have injury ICD-9 diagnosis codes between 800.0 and 959.9
  - Burn patients caused by lightning 994.0, and burns caused by electrical current 994.8
  - Anoxic brain injuries due to trauma mechanism;
    - 994.1 drowning
    - 994.7 asphyxiation and strangulation, suffocated by cave-in, constriction, pressure, strangulation, mechanical, bed clothes or plastic bag

Trauma Registry Inclusion Criteria plus at least one of the following

All trauma patients :

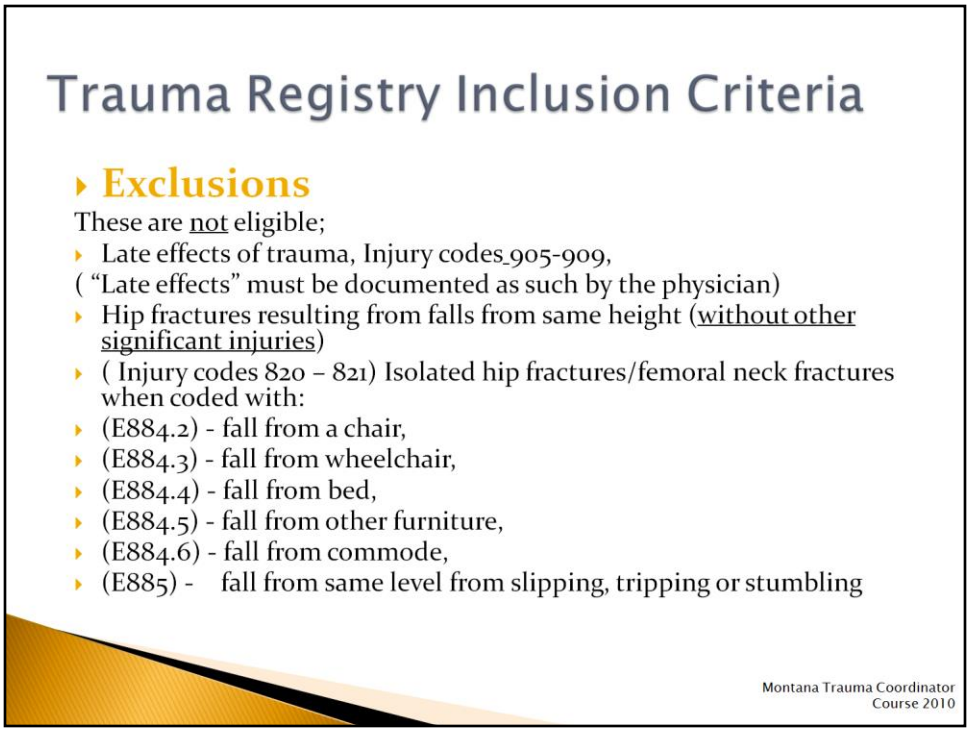
- that initiated FULL *or* PARTIAL Trauma Team Activation at your facility
- hospitalized at your facility for 48 hours or more
- with admission to an Intensive Care Unit at your facility
- who die in your facility, including those who die in the Emergency Department

- Continued on next slide

Trauma Registry Inclusion Criteria plus at least one of the following (cont'd)

Continued from Previous Slide:
All trauma patients :

- transferred to another facility for evaluation/treatment not available at your facility
- pediatric patients with injuries between the ages of 0-4 admitted to the facility (even if not for 48hrs or longer)
- with open long bone fractures taken to surgery at your facility within 24 hours of arrival at your facility
- taken to surgery at your facility for intracranial, intra-thoracic, intra-abdominal, or vascular surgery



Exclusions list those injured patients, who may meet inclusion criteria but are not eligible for trauma registry inclusion.

Note that only isolated hip fractures due to falls from the same height with any of the listed mechanisms **without other significant injuries** are excluded. This does NOT mean all patients who sustain significant injuries due to a fall from the same height and who meet other criteria are excluded. It also does not mean that a patient who sustains hip fractures and additional significant injuries due to other circumstances (fall off a cliff, motor vehicle crash, collapse of a building, etc) is excluded, either. As we evaluate patients to include/exclude, remember that we are evaluating injury patients who need "that next level up" of additional resources (Trauma Team activation, trauma resuscitation, expedited procedures and/or operative intervention, rapid transfer to higher levels of care, etc.)

There will always be some patients "outside the lines" who may not meet exact criteria. If you are unsure, contact us @ EMSTS or utilize the Trauma Listserve (hhs_trauma_registry@lists@mt.gov) to ask other trauma coordinator/registrars to give their feedback on whether or not to include a patient in the registry.

Trauma Registry Inclusion Criteria

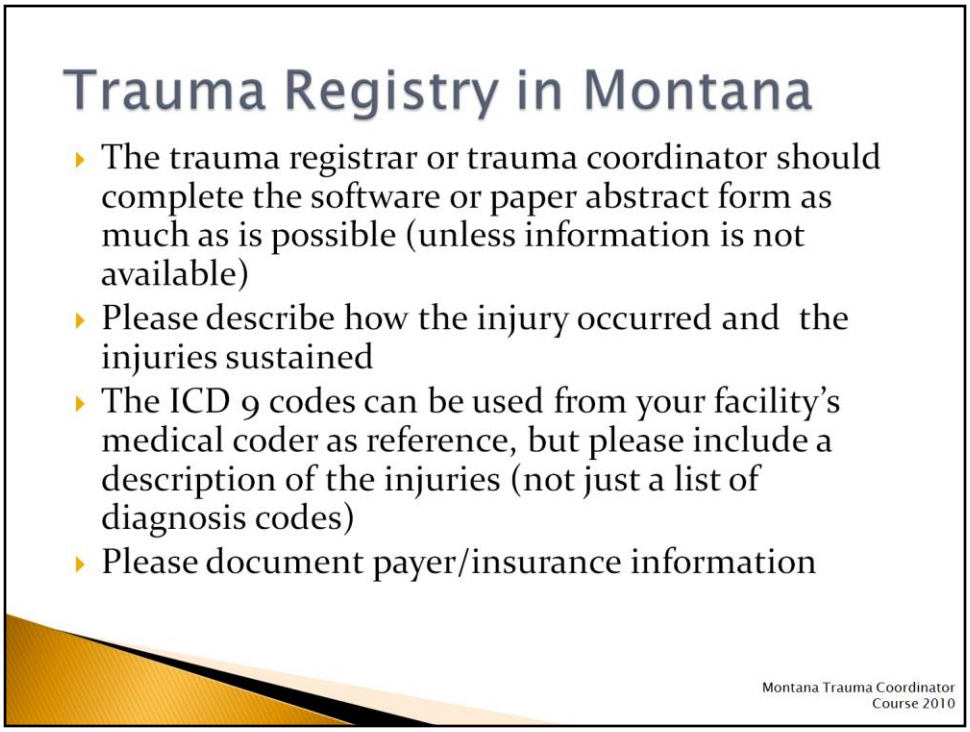
Exclusions, continued

- Isolated unilateral pubic ramus fractures resulting from falls from same height (without other significant injuries)
- Single-system/extremity orthopedic injuries (except femur fractures)
- Amputations distal to ankle/wrist NOT admitted to your facility for ≥ 48 hours
- Transfers with previous trauma, but now admitted for medical reasons not associated with the trauma or those transferred for personal convenience

Trauma Registry Inclusion Criteria

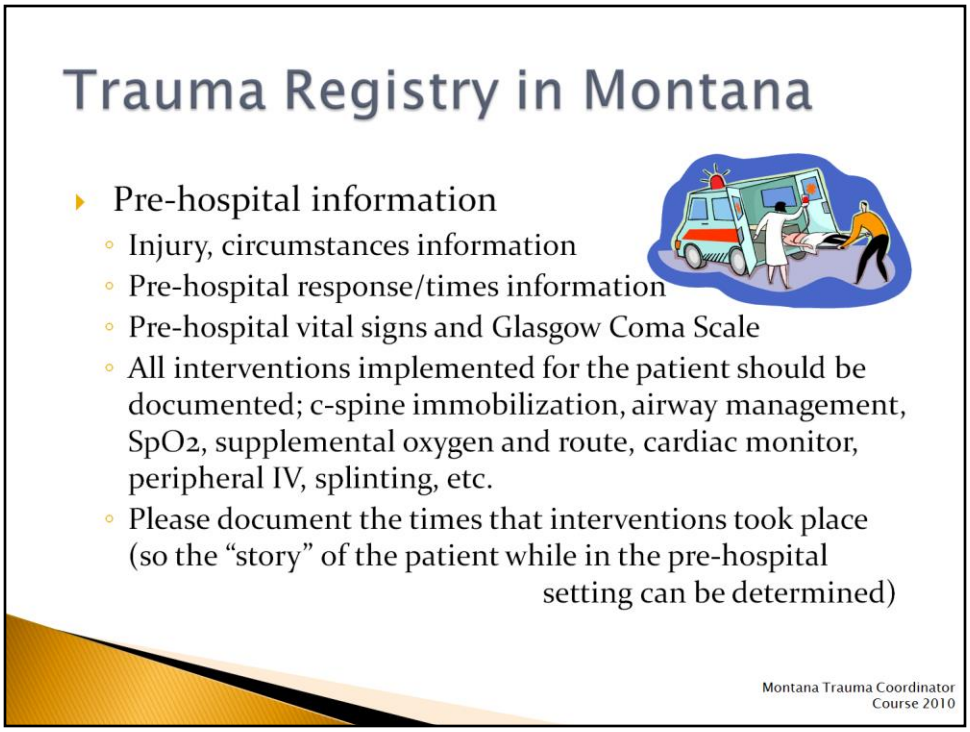
Exclusions, continued

- Transfers from another facility not meeting inclusion criteria (isolated hip fx/fall from same height, etc.)
- Poisoning, overdose
- Hypothermia and other cold injuries (with no associated trauma) Unless Trauma Team Activation
- Bites - insects, snakes (envenomation injuries)
- Chronic subdural hematoma
- Anoxic brain injuries due to non-trauma mechanism of asphyxia; Carbon monoxide, Inhalation food/ foreign bodies, other gases, fumes, vapors

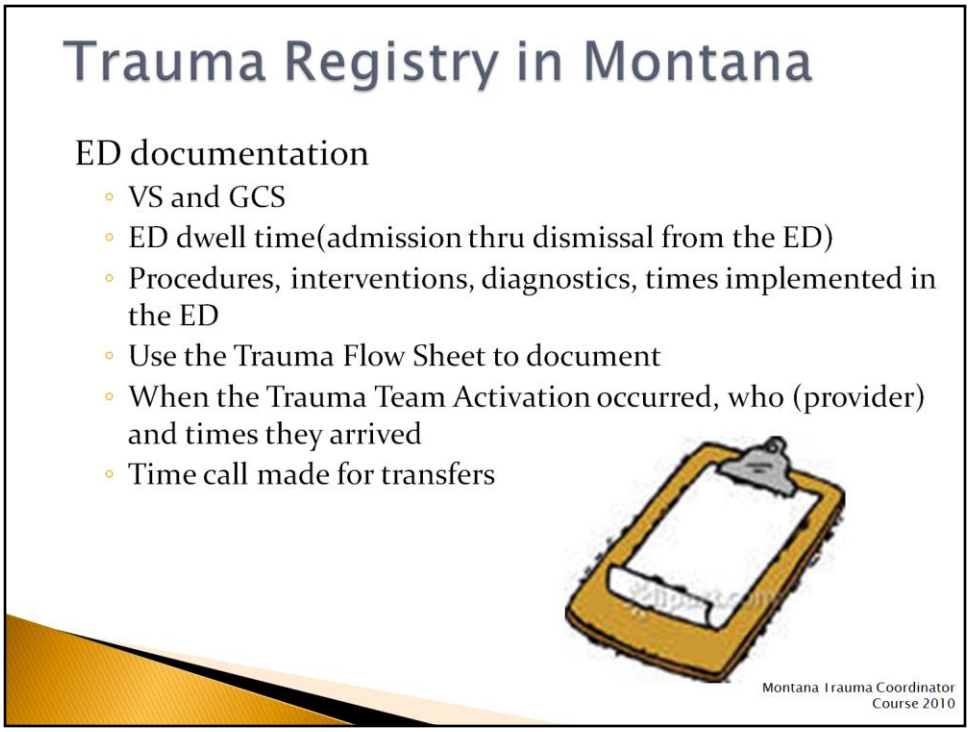


We do track many different data elements. We in Montana and across the nation track race, gender, ethnicity, age and insurance payer information. Why, you may ask? We want to identify trends regionally and as patients move across the State. We have identified racial differences in injury occurrence. We have identified trends in mechanisms of injury, blunt and penetrating causes of injury, injury occurrences by age and gender and trends in reimbursement.

Trauma coordinators consist mostly of RN's but we also include people who are EMTs, ward clerks, LPNs, nurse aides and medical records coders. Most of us who are not medical coders did not learn Etiology-coding or ICD-9 diagnosis and procedure coding. Many of us never paid any attention whatsoever to medical coding before becoming trauma program staff. Most of us have taught ourselves "on the job" and some of us have been lucky enough to have experienced people help us. If we would just document the injuries and describe the injuries, the software can assist us (for both paper & Collector users) to calculate codes within the software. Sometimes, smaller facilities won't know about the actual patient diagnoses (depending on the available diagnostic resources) prior to transferring the patient, but they can describe the closed head injury with GCS of 13 and LOC for 40 minutes in a confused and agitated patient or provide a description of the injuries they have diagnosed, such as fractures, contusions, abrasions and lacerations.



It really is essential to have the pre-hospital information. EMS begins the TEAM approach to trauma and is the initial "phase of care" for many injured patients. Trauma Team Activation should be initiated by the EMS response and communications. What happens in the field and the invaluable information communicated from the field helps the facility activate, assemble, plan, organize and prioritize care of the trauma patient. Many facilities have instituted an emergency tech position in the ED (with EMT certification as requirement) to assist with caring for the trauma patient within a facility. This can be very helpful for those smaller facilities with fewer available staff. All hands on deck, so to speak!



We would encourage facilities to use the trauma flow sheet when documenting care of the trauma patient. The Trauma Flow Sheet can provides "cues" about care and what should be documented. It really is helpful to know that the patient was cared for using ATLS guidelines and the ABC's were followed. In our feedback to facilities using the paper abstract, we do discuss issues of care that didn't happen in a timely matter, didn't happen at all or happened out of sequence. We want you to evaluate the care that is being provided to the patient and talk about what went right and what didn't go so well, and what needs to be done to change future care so that in the future the same issues don't re-occur. (More about that in Performance Improvement) Did things happen the right way, in the right order and in the right time frame????

Trauma Registry in Montana

- Integrating Registry Functions into the Trauma Program
  - The Trauma Registry information can be used by your facility to determine Performance Improvement issues and for your facility to help improve and enhance patient care
  - Identify processes needing revision
  - Identify Injury Prevention Activities
  - Identify educational opportunities for staff taking caring for trauma patients

Trauma Registry in Montana

- What and how do I know what patients to add into the Trauma Registry?
  - Utilize the State Inclusion Criteria
  - Patients who activated your Trauma Team, were transferred, admitted more than 48hr, admitted to OR/ICU
  - Patients who sustained injuries with ICD9 codes 800.0 to 959.9, plus those w/lightning/electrical injuries, burns, and traumatic mechanism anoxia

Trauma Registry in Montana

- Decide with your Trauma Medical Director what reports and generalized reports will be needed, when, and for which committees

Trauma Registry in Montana

- For those Registrars using "COLLECTOR"
  - The person should possess computer savvy/knowledge/skills
  - A basic knowledge of what occurs with the care of the trauma patient
  - Experience in coding using E-coding and ICD9 coding (desirable, but not essential)

Trauma Registry resources

Link resources:

- Trauma Registry Inclusion Criteria, April 2009

Trauma Registry Inclusion Criteria

- Paper Abstract for 2009

Paper Trauma Abstract Form-Blank

- CV4 Data Dictionary

Montana Collector IV Data Dictionary